SCREENING OF POTENTIAL BACTERIA WITH ANTAGONISM PROPERTIES ISOLATED FROM POND SOIL IN FOREST OF UiTM NEGERI SEMBILAN, KUALA PILAH CAMPUS

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This Final Year Project Report entitled "**Screening Of Potential Bacteria with Antagonism Properties Isolated from Pond Soil in Forest Of UiTM Negeri Sembilan, Kuala Pilah Campus**" was submitted by Fathin Amirah binti Mursidi, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons) Biology, in the Faculty of Applied Sciences, and was approved by

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ABSTRACT

SCREENING OF POTENTIAL BACTERIA WITH ANTAGONISM PROPERTIES ISOLATED FROM POND SOIL IN FOREST OF UITM NEGERI SEMBILAN, CAMPUS KUALA PILAH

This research project was aimed to isolate a pool of bacteria from pond soil of UiTM Negeri Sembilan, Kuala Pilah Campus using serial dilution followed by the screening of antagonism activities of the non-hemolytic isolates and to identify gram positive bacteria. This research involved collection of soil sample, isolation of soil bacteria, purifying, preliminary screening of hemolytic activity, antagonism test by well diffusion method and identification of gram positive bacteria by gram staining. 80 different bacteria have been successfully isolated. Investigation of the antagonism activities revealed that only five non-hemolytic gram positive soil bacteria which were B6, B9, B32, B64, and B79 have the ability to act as antagonist against pathogenic bacteria such as *Staphylococcus aureus* and *Pseudomonas aeruginosa.* The isolates were discovered to be highly active against *S. aureus* followed by *P. Aeruginosa*. *E. coli* was the most resistant bacterial pathogen since none of the isolates found to be active against this pathogen. This significant finding suggest that pond soil in UiTM Negeri Sembilan, Kuala Pilah Campus may be a common source for the isolation of novel antimicrobials that are clinically and agriculturally important

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